APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,770	06/30/2003	Miguel Guerrero	42P16532	2191

8791   7590   04/28/2008
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EXAMINER
CHAN, SAI MING

ART UNIT	PAPER NUMBER
2616	

MAIL DATE	DELIVERY MODE
04/28/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>2/13/2008</u>.
2a) ☐ This action is **FINAL**.   2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1-30</u> is/are pending in the application.
   4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) <u>1-30</u> is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
   Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
   Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
   a) ☐ All   b) ☐ Some * c) ☐ None of:
   1. ☐ Certified copies of the priority documents have been received.
   2. ☐ Certified copies of the priority documents have been received in Application No. _____.
   3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
   * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness

rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459

(1966), that are applied for establishing a background for determining obviousness under 35

U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating

obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the

claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c)

and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

   Claims 1-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over

McGreevy (U.S. Patent #20030078913), in view of **Liao (U.S. Patent #7054315).**

   Consider **claims 1, 10, 19 and 28,** McGreevy clearly disclose and show a method

comprising:

   grouping single fields (paragraph 0014 (one or more keyterms)) of a multiple-field

source (paragraph 0014 (relational models of subsets of a database)) into a plurality of

multiple-field keys (MFKs) of a search target (paragraph 0014 (one or more keyterms)),

each MFK of the search target having single fields that correspond to single fields in

one of a plurality of multiple-field vectors (MFVs) (paragraph 0014 (compare to the

relational subsets of the database)) of entries in a data structure;

   generating a set of queries based, at least in part, on the MFKs (paragraph 0014

(query), paragraph 0165 (any number of keyterms as queries);

   However McGreevy does not specifically show wild card values.

   In the same field of endeavor, Liao clearly shows:

   each query has a different MFK as a lead MFK ((ps0 has 010001) and (ps1 has

110010));

   using a query (column 12, lines 19-46) to determine whether the non-wildcard

values in the MFVs of an entry match the non-wildcard values in corresponding MFKs of

the search target (fig. 10 (Final Match Vector); column 16, lines1-8); and

using, if no entry has non-wildcard values in the MFVs that match the

corresponding non-wildcard values in the MFKs, the queries to determine whether the

entry has non-wildcard values in a MFV that match the non-wildcard values in a

corresponding lead MFK, plus remaining MFVs that match corresponding remaining

MFKs based on matching the non-wildcard values and wildcard values (fig. 10

(EMMM_Lookup) to (Final Match Vector); column 16, lines 9-67, column 17, lines 1-18).

Therefore it would have been obvious to a person of ordinary skill in the art at the

time the invention was made to demonstrate the multi-field search method, as taught by

McGreevy, and show the wildcard values, as taught by Liao, so that the search can be

done proficiently.

Consder **claim 2, and as applied to claim 1 above,**

claim 11, and **as applied to claim 10 above,**

claim 20, and **as applied to claim 19 above,**

McGreevy, as modified by Liao, clearly disclose and show the method as described.

However McGreevy does not specifically show wild card.

In the same field of endeavor, Liao clearly shows that the entries of the data

structure are stored such that the MFVs that have non-wildcard values are located at

the end of the entry (column 1, lines 43-56, (In items 2-4, non-wildcard values are on

the left hand side of the Longest Prefix Match route table).

Therefore it would have been obvious to a person of ordinary skill in the art at the

time the invention was made to demonstrate the multi-field search method, as taught by

McGreevy, and show the wildcard values, as taught by Liao, so that the search can be done proficiently.

Consder **claim 3**, and **as applied to claim 1 above**,

claim 12, and **as applied to claim 10 above**,

claim 21, and **as applied to claim 19 above**,

McGreevy, as modified by Liao, clearly disclose and show the method as described.

However McGreevy does not specifically show MFVs with non-wild card values.

In the same field of endeavor, Liao clearly shows that the entries of the data structure are arranged so that the MFVs that have non-wildcard values are placed at the end of the entry (column 1, lines 43-56, (item 5)).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to demonstrate the multi-field search method, as taught by McGreevy, and show MFVs with non-wild card values, as taught by Liao, so that the search can be done proficiently.

Consider **claim 4**, and **as applied to claim 1 above**,

claim 13, and **as applied to claim 10 above**,

claim 22, and **as applied to claim 19 above**,

claim 29, and **as applied to claim 28 above**,

McGreevy, as modified by Liao, clearly disclose and show the method as described.

However McGreevy does not specifically show different values of non-wild card values.

In the same field of endeavor, Liao clearly shows the non-wildcard values comprise a fixed value and/or a range of fixed values (column 2, lines 42-44).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to demonstrate the multi-field search method, as taught by McGreevy, and show different values of non-wild card values, as taught by Liao, so that the search can be done proficiently.

Consider **claim 5**, and **as applied to claim 1 above**,

claim 14, and **as applied to claim 10 above**,

claim 23, and **as applied to claim 19 above**,

McGreevy, as modified by Liao, clearly disclose and show the method as described.

However McGreevy does not specifically show matching non-wild card values.

In the same field of endeavor, Liao clearly shows MFV with matching non-wild card values.

locating the entry having non-wildcard values in the MFV that match the non-wildcard values in the corresponding lead MFK, plus remaining MFVs that match corresponding remaining MFKs based on matching the non-wildcard values and wildcard values (fig. 10; column 16, lines 9-67, column 17, lines 1-18); and

performing an operation associated with the located entry (fig. 10 (EMMM_Lookup) to (Final Match Vector)).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to demonstrate the multi-field search method, as taught by

McGreevy, and show matching non-wild card values, as taught by Liao, so that the search can be done proficiently.

Consider **claim 6,** and **as applied to claim 1 above,**

   claim 15, and **as applied to claim 10 above,**

   claim 24, and **as applied to claim 19 above,**

   claim 30, and **as applied to claim 28 above,**

McGreevy, as modified by Liao, clearly disclose and show the method as described.

However McGreevy does not specifically show multiple-field source comprises a data packet having single fields in its header.

In the same field of endeavor, Liao clearly shows the multiple-field source comprises a data packet having single fields in its header (fig. 3; fig. 6; column 8, lines 57-67).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to demonstrate the multi-field search method, as taught by McGreevy, and show multiple-field source comprises a data packet having single fields in its header, as taught by Liao, so that the search can be done proficiently.

Consider **claim 7,** and **as applied to claim 6 above,**

   claim 16, and **as applied to claim 15 above,**

   claim 25, and **as applied to claim 24 above,**

McGreevy, as modified by Liao, clearly disclose and show the method as described.

However McGreevy does not specifically show the operation comprises other actions.

In the same field of endeavor, Liao clearly shows operation comprises one of the following: dropping the data packet, mirroring, metering, traffic shaping, rate limiting, accounting, statistics gathering, providing quality of service (QoS), redirecting to a central processing unit (CPU) for further processing, or sampling a subset of the packets to a CPU (column 1, lines 12-26; fig 12; column 6, lines 12-13; in addition, the application (paragraph 18) indicates that the above mentioned functions are known in the art).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to demonstrate the multi-field search method, as taught by McGreevy, and show the operation comprises other actions, as taught by Liao, so that the search can be done proficiently.

Consider **claim 8**, and **as applied to claim 1 above,**

> **claim 17**, and **as applied to claim 10 above,**

> **claim 26**, and **as applied to claim 19 above,**

However McGreevy does not specifically show fewer than all MFVs in the entries include one single field.

In the same field of endeavor, Liao clearly shows fewer than all MFVs in the entries include one single field (fig.5 (ps0 and ps1); column 12, lines 4-18).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to demonstrate the multi-field search method, as taught by McGreevy, and show fewer than all MFVs in the entries include one single field, as taught by Liao, so that the search can be done proficiently.

Consider **claim 9**, and **as applied to claim 1 above**,

       claim 18, and **as applied to claim 10 above**,

       claim 27, and **as applied to claim 19 above**,

However McGreevy does not specifically show MFVs in the entries include two or more single fields.

In the same field of endeavor, Liao clearly shows the MFVs in the entries include two or more single fields (fig.5 (ps0 and ps1); column 12, lines 4-18).

Therefore it would have been obvious to a person of ordinary skill in the art at the time the invention was made to demonstrate the multi-field search method, as taught by McGreevy, and show MFVs in the entries include two or more single fields, as taught by Liao, so that the search can be done proficiently.

Response to Arguments

Applicant's arguments filed on February 13, 2008, with respect to claim 1on page 11 and through page 18 of the remarks, have been fully considered. Basically the applicant argued that Liao does not teach or suggest "single fields of a multiple-field source". The Examiner has introduced a new reference which teachs or suggests "single fields of a multiple-field source". See the above rejections of claim 1 for the relevant interpretation and citations found in McGreevy et al., disclosing the limitation.

Conclusion

Any response to this Office Action should be **faxed to** (571) 273-8300 **or mailed to**:

       Commissioner for Patents
       P.O. Box 1450
       Alexandria, VA 22313-1450

Hand-delivered responses should be brought to

Customer Service Window
Randolph Building
401 Dulany Street
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Sai-Ming Chan whose telephone number is (571) 270-1769. The Examiner can normally be reached on Monday-Thursday from 6:30am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Seema Rao can be reached on (571) 272-3174. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 571-272-4100.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

/Sai-Ming Chan/
Examiner, Art Unit 2616

April 23, 2008
/Seema S. Rao/

Supervisory Patent Examiner, Art Unit 2616